

### **Amendments to the Specification**

Please replace the paragraph beginning on page 13, line 10 with the following amended paragraph:

Changes in MEI can be used to measure the extent of pre-existing stenosis in a patient's coronary artery. At least one electrode pair is attached to the myocardium in the region of the myocardium perfused by the coronary artery. During surgery, but before occlusion of the artery, the usual above described baseline measurements are recorded and a mean myocardial electrical impedance, for use as a baseline, and the variance of the baseline measurements are computed. After the baseline measurements are made, the coronary artery is occluded proximally. The mean myocardial electrical impedance value between the electrodes is then periodically measuring over an interval of time and the measurement data is stored and displayed. After the mean myocardial electrical impedance rises above a value equal to the arithmetic sum of the mean [5] baseline myocardial electrical impedance and the variance, the extent of stenosis pre-existing in the coronary artery is diagnosed as a continuous, smooth, decreasing function of the extent of rise of the mean myocardial electrical impedance above the baseline value. The more the value of MEI increases, the less restricted was the artery.

Please replace the paragraph beginning on page 15, line 18 with the following amended paragraph:

The pathophysiologic disease state of ischemia in a portion of the myocardium can be measured by attaching the electrodes, taking and recording the above described baseline measurements and computing a mean myocardial electrical impedance, for use as a baseline, and the variance of the baseline measurements. The mean myocardial electrical impedance value between the electrodes is then periodically ~~measuring~~ measured over an interval of time and the measurement data is stored and displayed. After the mean myocardial electrical impedance between the electrode pairs rises above a value equal to the arithmetic sum of the baseline myocardial electrical impedance and the variance, myocardial ischemia severity is diagnosed as a continuous, smooth, increasing function of the extent of the rise of the mean myocardial electrical impedance above the baseline value. The greater the increase in MEI, the more severe is the ischemia.